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| APPLICATION NO./<br>CONTROL NO. | FILING DATE | FIRST NAMED INVENTOR /<br>PATENT IN REEXAMINATION | ATTORNEY DOCKET NO. |
|---------------------------------|-------------|---|---------------------|
| 10529289                        | 3/25/2005   | SUHARA ET AL.                                     | 268120US0PCT        |

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|----------|
| EXAMINER |
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EUGENIA WANG

| ART UNIT | PAPER    |
|----------|----------|
| 1795     | 20080213 |

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**

The Advisory Action corresponding to this case and another case were accidentally switched. Please replace the Advisory Action mailed February 6, 2008 with the one enclosed herein.

/Gregg Cantelmo/  
for E. Wang, Examiner of Art Unit 1795

|  |                                      |                                      |  |
|--|--------------------------------------|--------------------------------------|--|
| <p align="center"><b>Advisory Action</b><br/><b>Before the Filing of an Appeal Brief</b></p> | <b>Application No.</b><br>10/529,289 | <b>Applicant(s)</b><br>SUHARA ET AL. |  |
|  | <b>Examiner</b><br>EUGENIA WANG      | <b>Art Unit</b><br>1795              |  |

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 24 January 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b) ☐ They raise the issue of new matter (see NOTE below);  
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
 5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
 6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
 The status of the claim(s) is (or will be) as follows:  
 Claim(s) allowed: \_\_\_\_\_.  
 Claim(s) objected to: \_\_\_\_\_.  
 Claim(s) rejected: \_\_\_\_\_.  
 Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
 13. ☐ Other: \_\_\_\_\_.

/Gregg Cantelmo/  
for E. Wang, Examiner of Art Unit 1795

Continuation of 11. does NOT place the application in condition for allowance because: Applicant argues that the aspect ratio with the teaching of Moriuchi et al. is not suggested, only the diameter is described.

Examiner respectfully disagrees. All particles have an aspect ratio, and it is disclosed by Moriuchi et al. that the projection of the cross-section of the particles is circular, wherein the particles are assumed to be sphere-like in shape (para 0023). Accordingly, the aspect ratio would be a ratio of the height (diameter length in a circle) and the width (diameter length in a circle). There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference. Schering Corp. v. Geneva Pharm. Inc., 339 F.3d 1373, 1377, 67. Applicant has not provided proof as to how the interpretation of aspect ratio taken by the Examiner is not applicable or does not exist, and thus the rejection is maintained.

Applicant argues that the diameters of the particles of the present invention does not always mean that the aspect ratio of the particles of the present invention is equivalent to the aspect ratio of the particles of Moriuchi et al.

Examiner respectfully disagrees. Applicant has not provided any proof as to how the diameters of the particles do not provide the aspect ratio of the claimed invention. Additionally, in the previous office action, Examiner clearly sets for a reason for expectation, which is reiterated herein for clarity's sake. "Although an aspect ratio is not specifically mentioned in Moriuchi et al., the aspect ratio one of ordinary skill would expect that aspect ratio of the particles taught by Moriuchi et al. would be close to 1/1 (indicative of a spherical particle). This expectation can be made, as Moriuchi et al. only defines the particles with respect to the diameter, suggesting that the particle is spherical. Moreover, Moriuchi et al. suggests that the particles have a spherical shape, as the projection of light on the particles is used to obtain a circular image, wherein the diameter is used to measure a spherical equivalent diameter (para 0023)."

Applicant argues that the test of diameter measuring of Moriuchi et al. is measured by laser beam scattering and does not show the proportion of the major axis to the minor axis (as is measured by the instant application).

Examiner respectfully disagrees. The laser beam scattering does provide a 2-D cross-sectional and therefore defines a major and minor axis. The major and minor axes would be the height and the width. In a circular cross section the major and minor axes would have the same length and would accordingly yield an aspect ratio of 1/1. Additionally, as mentioned, Moriuchi et al. in para 0023 does talk about sphere shape and spherical equivalent diameters. Examiner is unsure how this does not define the 3-D shape of the particle as spherical.

Applicant argues that the "spherical equivalent diameter" of Moriuchi et al. is not really spherical but is only assumed to be spherical.

Examiner respectfully disagrees. Para 0023 of Moriuchi et al. talks about the spherical equivalent diameter and the fact that the projection of the laser is made from a sphere. Since Moriuchi et al. itself is saying that the particles have an approximately spherical shape, Examiner is unsure how the particles would not be spherical or at the very least how a spherical shape is not suggested by Moriuchi et al. Because Applicant provides no proof as to the fact that Moriuchi et al.'s particles are not spherical, the rejection is maintained.

\*\* It is noted that all of the arguments above are drawn as to how Moriuchi et al. does not teach spherical particles and does teach the aspect ratio. The rejections above have been maintained for the reasons above. However, Examiner would like to point out that an alternate obviousness rejection was applied as well, using Matsumoto et al. Since Applicant has not addressed the obviousness rejection, Examiner maintains the rejection as being proper.

Applicant argues that the combination of Moriuchi et al., Nakamura et al., and Matsubara et al. does not disclose or suggest the present invention wherein a lithium-cobalt composite oxide (first particles) have a predetermined particle size distribution and a lithium-cobalt composite oxide (second particles) filling the space amount the lithium-cobalt composite oxide (first particles) are mixed in a predetermined mixing ratio to form a mixture.

Examiner respectfully disagrees. Within the abstract of Moriuchi et al, two different particles are claimed, wherein at least a portion of the size range of both fits that of the instant application. Furthermore, the mass ratio mixture of the two is claimed in para 0010 (1:0.1-1.5, .67 to 10, which overlaps with the claimed range of 1/2 to 1/9, 0.5 to 9). Since both types of particles with the same sizes that are claimed in the same mass ratio claimed are used together, Examiner is unsure how the mixture does not read on that of the claimed invention and maintains the rejection.

Applicant argues that Moriuchi et al., Nakamura et al, and Matsubara et al. fail to disclose nor suggest the technical concept of realizing a compacted dense structure and a large volume capacity density and press density by using the positive electrode active material having such constitution.

Examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the concept of realizing a compacted dense structure and a large volume capacity density and press density by using the positive electrode active material having such constitution) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, although this concept is taught by Applicant, such a concept does not affect the scope of the claim. Applicant has not shown how the claimed invention is different than that of the combination of Moriuchi et al., Nakamura et al., Matsubara et al., and Matsumoto et al.

Applicant argues that the combination of the various limitations of claim 1 provides a superior positive active material that is

impossible to obtain by combining Moriuchi et al., Nakamura et al., and Matsubara et al.

Examiner respectfully disagrees. Applicant has not provided proof as to why the combined teaching of Moriuchi et al., Nakamura et al., Matsubara et al., and now Matsumoto et al. would not reasonably exhibit the same characteristics as the claimed invention. The comparisons shown in table 1 are taken from Applicant's own disclosure and fail to compare Applicant's disclosure to the combined teaching of Moriuchi et al., Nakamura et al., Matsubara et al., and now Matsumoto et al.

Applicant argues that examiner uses impermissible hindsight to show all of the limitations (especially with respect to claims 3 and 22 with regards to (a) the compact dense structure, (b) large volume capacity density, and (c) press density).

Examiner respectfully disagrees. With respect to (a) and (b), Examiner would like to note that the compact dense structure and volume capacity is not claimed. Features upon which applicant relies (i.e., the concept of realizing a compacted dense structure and a large volume capacity density and press density by using the positive electrode active material having such constitution) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). With respect to (c) In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, there is a clear reason to combine Moriuchi et al. with Matsubara et al. based on the teaching of Matsubara et al. The motivation, as set forth, is that the claimed press density be to decrease the moving distance between particles to achieve higher capacity. Applicant has not provided any proof as to why this would not be obvious to one of ordinary skill in the art, and thus the rejection is maintained.

Applicant argues that Moriuchi et al. does not disclose the press density, surface area, and half width of diffraction peak.

Examiner would like to note that Matsubara et al. is being relied upon to teach these limitations.

Applicant argues that it is not inherent for Matsubara et al.'s material to have the same half value diffraction peak as claimed, just because the materials used are similar.

Examiner respectfully disagrees. Because of the similarity of the materials, the characteristics would be expected to be inherent. Thus Examiner has set for the reason for expected inherency. Applicant provides no proof to the contrary. Without proof, Examiner maintains the rejection.

Applicant argues that there is no motivation to impart the properties of Matsubara et al. (especially with respect to surface area and press density) with that of Moriuchi et al.

Examiner respectfully disagrees. The motivation is clearly set forth within the rejection and is reiterated herein for clarity's sake: "The motivation for having a high surface area is to maximize surface area of the active material, and the motivation for having a high press density is to decrease the moving distance between the particles. Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the lithium cobalt oxide material of Moriuchi et al. to include having a surface area ranging from 0.3 to 0.7 m<sup>2</sup>/g and a press density 3.1 to 3.4 g/cm<sup>3</sup> as claimed in the instant application and taught within the ranges of Matsubara in order to increase the density of the material to achieve higher capacity battery with an high charge/discharge rate." Examiner is uncertain how the previous statement used within the previous office action fails to provide motivation, and thus maintains the rejection.